F. W. SALTZMAN.

DRIP PAN CIRCUIT CLOSER.

APPLICATION FILED AUG. 8, 1918.

1,324,522.

Patented Dec. 9, 1919.

2 SHEETS—SHEET 1.

FIG. 1.

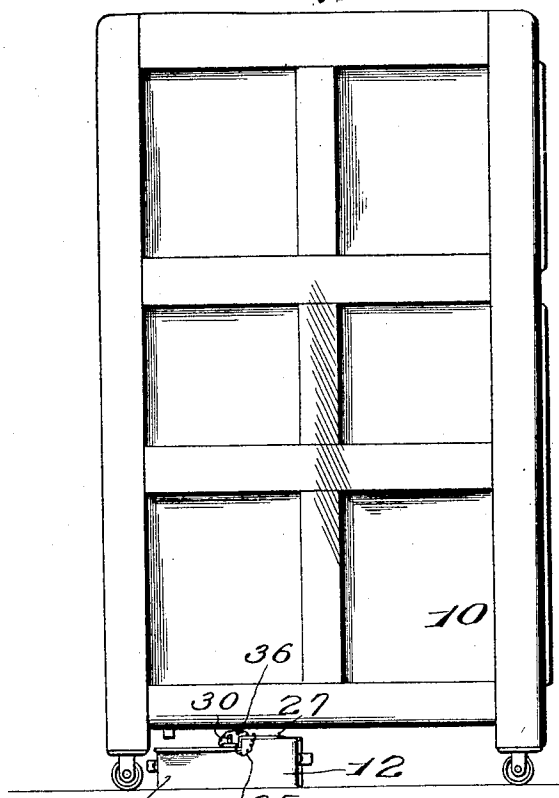
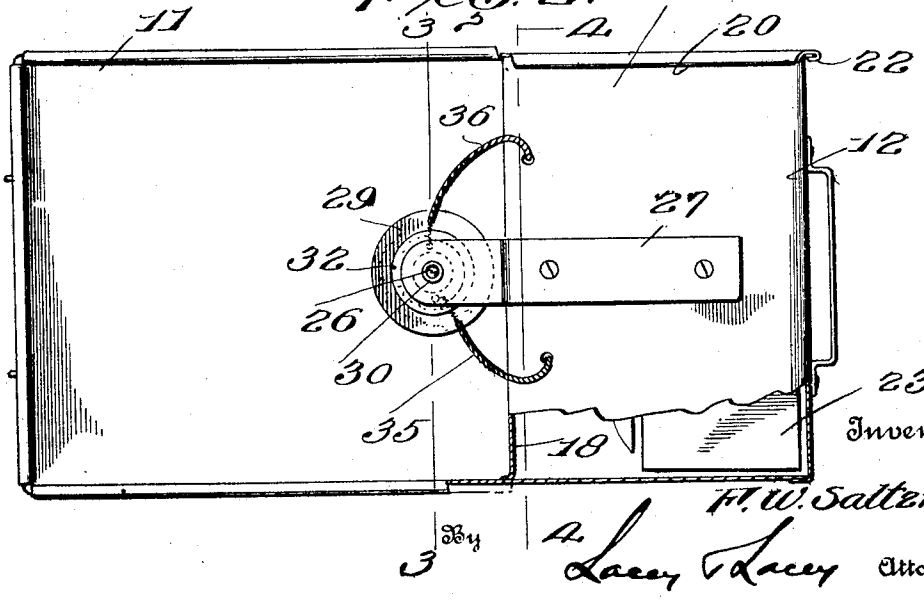


FIG. 2.



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2 SHEETS—SHEET 2.

FIG. 3.

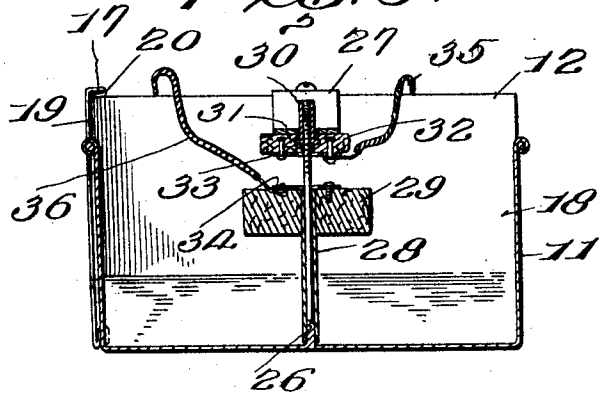


FIG. 4.

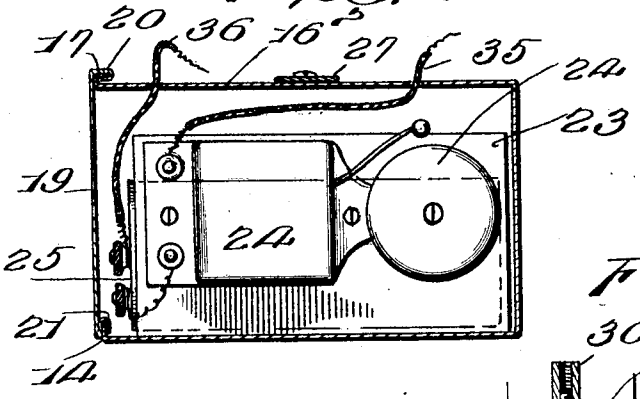


FIG. 6.

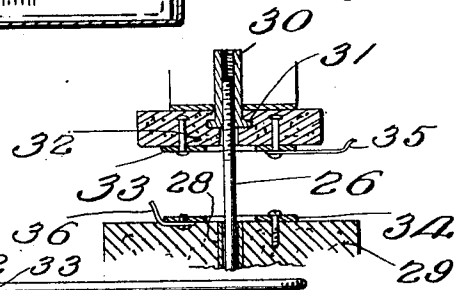
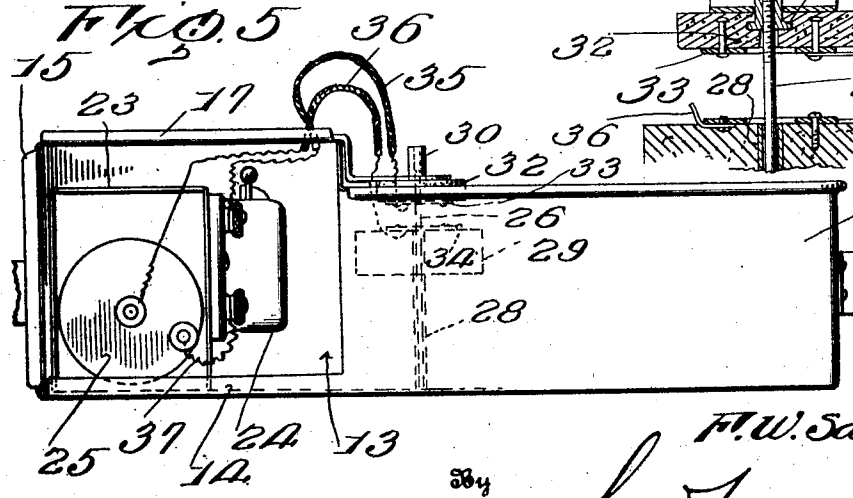


FIG. 5.



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UNITED STATES PATENT OFFICE.

FRANK WILLIAM SALTZMAN, OF ENGLAND, ARKANSAS.

DRIP-PAN CIRCUIT-CLOSER.

1,324,522. Specification of Letters Patent. Patented Dec. 9, 1919.

Application filed August 8, 1918. Serial No. 248,919.

To all whom it may concern:

Be it known that I, FRANK WILLIAM SALTZMAN, citizen of the United States, residing at England, in the county of Lonoke and State of Arkansas, have invented certain new and useful Improvements in Drip-Pan Circuit-Closers, of which the following is a specification.

This invention relates to an improved drip pan and alarm for refrigerators, ice boxes, and the like, and has as its primary object to provide a device of this character wherein the alarm will be sounded when the drip pan becomes filled, so that the possibility of the overflowing of the pan will be reduced to a minimum.

The invention has as a further object to provide a construction wherein the drip pan will be formed with a battery compartment or housing integral with the pan so that a battery for the alarm, as well as the alarm mechanism, may without the necessity for disconnecting the alarm, be removed, with the pan, from beneath a refrigerator when it is desired to empty the pan.

And the invention has as a still further object to provide an arrangement wherein one of the contacts employed for closing a circuit through the alarm may be adjustably elevated for varying the water level in the pan at which the alarm will be sounded.

Other and incidental objects will appear as the description proceeds. In the drawings, wherein I have illustrated the preferred embodiment of the invention, and wherein similar reference characters designate corresponding parts throughout the several views:

Figure 1 is a side elevation showing my improved device in connection with a refrigerator of conventional type,

Fig. 2 is a plan view of the device, this view being partly broken away and shown in section,

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2,

Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 2,

Fig. 5 is a side elevation of the device with the door of the battery compartment removed, and

Fig. 6 is a fragmentary vertical sectional view showing in detail the mounting of the fixed and movable contacts for the alarm.

Referring now more particularly to the drawings, I have shown the present invention in connection with a conventional type of refrigerator 10. The improved device is designed to be placed beneath the refrigerator for catching the drip therefrom and is entirely independent of the refrigerator so that the device may, when the drip pan thereof has become filled, be readily displaced and emptied. In carrying out the invention I employ a preferably oblong drip pan 11 which is formed with side, end and bottom walls and may be constructed of sheet metal or other suitable material. The drip pan may, of course, be varied in size and depth as found desirable, and integrally formed with the pan at one end thereof is a battery compartment 12. This battery compartment rises somewhat above the top edge of the pan and is of a length substantially equal to that of the pan. Preferably, the bottom wall of the pan is, as shown in Fig. 2 of the drawings, extended to form the bottom wall and one side wall of the said compartment while the rear side wall of the pan is similarly extended to form the back wall of the compartment. At the front end of the compartment, the front side wall of the pan is cut away to form a door opening 13 for the compartment and at the bottom of this door opening, a portion of the said side wall is extended across the opening to form an upstanding flange 14. Formed from the outer side wall of the compartment, at the outer edge of the door opening, is a laterally directed stop flange 15 and closing the top of the compartment is a top wall 16 provided at the upper edge of the door opening with an upwardly directed flange 17. A partition 18 extending transversely of the pan forms the inner end wall of the pan as well as the adjacent side wall of the compartment 12. Normally closing the door opening 13 of the compartment is a sliding door 19. This door is also preferably formed of suitable sheet metal and is provided at its upper edge with a laterally directed channel shaped flange 20 slidably engaging the flange 17 at the top of the door opening, while at the lower edge of the door is formed a similarly shaped flange 21 disposed at substantially right angles to the flange 20 and slidably engaging the flange 14 at the bottom of the door opening. These several flanges will thus support the door to be freely moved to open or closed position and formed on the door at its outer end edge is a rearwardly directed

flange 22 adapted to engage around the stop flange 15 for limiting the door in its movement to closed position.

Removably fitted within the battery compartment 12 and freely received therein is a battery box 23 which may be formed of wood or other approved material and screwed or otherwise secured to one side wall of this box is a suitable annunciator, as conventionally shown at 24, the annunciator illustrated being an ordinary electric bell.

Removably fitted within the box is a dry battery or other suitable source of electrical energy 25. It is now to be observed that the battery box, together with the bell 24 and battery 25, may be bodily removed from the battery compartment while, under ordinary circumstances, this box, as well as the bell and battery, will be inclosed within said compartment by the door 19 and retained within the compartment thereby.

Upstanding from the bottom wall of the drip pan medially thereof and adjacent the inner end of the said pan, is a post 26 suitably secured to the said bottom wall. Bolted or otherwise secured to the top wall of the battery compartment 12 is a flexible guide arm 27, the free extremity of which overhangs the said compartment above the pan 11 and freely receives the upper extremity of the post therethrough. Slidable upon the post, is an elongated sleeve 28 and connected in any approved manner to the upper end of this sleeve is a float 29. This float may be formed of wood, cork, or other approved material and, as shown in Fig. 3 of the drawings, will normally be supported within the pan by the sleeve 28 resting upon the bottom wall of the pan. Threaded upon the upper extremity of the post is an adjustable sleeve 30 which is freely received through the free extremity of the arm 27 and is provided at its lower end with an annular shoulder 31. This shoulder is sunk into a contact supporting member or disk 32, axially thereof, for connecting the disk with the sleeve so that the sleeve thus supports the disk for adjustment vertically upon the said post. The disk 32 may be formed of wood, cork, or other approved material, as in the instance of the float 29. Riveted or otherwise secured to the lower face of the disk 32 is an annular fixed contact 33 surrounding the post in spaced relation thereto. Suitably secured to the upper face of the float is a similar movable contact 34, also surrounding the post in spaced relation thereto. A wire 35 is connected at one end with the contact 33 and is led through the top wall of the battery compartment 12 to be connected at its opposite end to one terminal of the annunciator 24. Connected at one end to the contact 34 is a wire 36 which is also led through the top wall of the battery compartment and is connected at its opposite end to one terminal of the battery 25. Leading from the other terminal of the battery to the free terminal of the annunciator is a wire 37.

As will now be readily understood, the circuit through the annunciator 24 will normally be broken at the contacts 33 and 34. However, when the water rises within the drip pan, as this pan becomes filled, the float will be lifted to shift the contact 34 into engagement with the contact 33 when the circuit will be closed for sounding the alarm and, of course, the alarm will continue to sound until the drip pan is emptied. Possibility of overflowing of the pan will thus be reduced to a minimum. In this connection it is to be observed that by rotating the sleeve 30 upon the guide post 26 for the float, the fixed contact 33 may be adjusted vertically with respect to the post. Thus the water level at which the alarm will be sounded may be easily varied. Furthermore, it is to be noted that since the battery and annunciator are inclosed within the battery compartment which is formed as an integral part of the pan, it becomes unnecessary, when emptying the pan, to disconnect the alarm. I accordingly provide a particularly simple and efficient construction for the purpose set forth and a device which may be readily employed with substantially any conventional type of refrigerator, ice box, or the like.

Having thus described the invention, what is claimed as new is:

1. A device of the character described including a fixed post, a sleeve adjustable upon the post and provided with a shoulder, an insulating contact supporting member having said shoulder embedded therein for connecting the member with the sleeve, a fixed contact carried by said member and insulated by the member with respect to the post and sleeve, a float slidable upon the post, and a movable contact carried by the float and adapted to coöperate with the fixed contact for closing a circuit through the contacts.

2. A device of the character described including an upstanding post, a sleeve slidable upon the post, a float of insulating material carried by the sleeve, a fixed contact, and a movable contact carried by the float and insulated thereby with respect to the sleeve, the movable contact being adapted to coöperate with the fixed contact for closing a circuit therethrough.

3. A device of the character described including an upstanding post, a sleeve slidable upon the post, a float of insulating material carried by the sleeve, the sleeve projecting below the float and normally supporting the float above the lower end of the post, a fixed contact, and a movable contact carried by the float and insulated thereby with respect to the sleeve, the movable contact being

adapted to coöperate with the fixed contact for closing a circuit therethrough.

4. A device of the character described including an upstanding post, a sleeve rotatably adjustable upon the post, a fixed contact operatively connected with said sleeve, a float guided by the post, and a movable contact carried by the float and adapted to coöperate with the fixed contact for closing a circuit therethrough.

5. A device of the character described including an upstanding post, a sleeve mounted upon the post, a member of insulating material carried by the sleeve, a fixed contact surrounding the post upon the member and insulated thereby with respect to the post and sleeve, a float of insulating material slidable upon the post, and a movable contact surrounding the post upon the float and insulated thereby with respect to the post, the movable contact being adapted to coöperate with the fixed contact for closing a circuit therethrough.

In testimony whereof I affix my signature.

FRANK WILLIAM SALTZMAN. [L. S.]